

GREY

Dart Aerospace Ltd.

Date: Monday, 05/01/2009 7:57:55 AM
User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : TUBE ASSEMBLY
Job Number : 44356
Estimate Number : 10426
P.O. Number :
This Issue : 05/01/2009 S.O. No. :
Prsht Rev. : NC Part Number : D3304044
First Issue : / / Type : MACHINED PARTS Drawing Number : D3304 REV. B
Previous Run : 42173 Drawing Revision : B
Material :
Due Date : 31/01/2009 Qty: 10 Um: Each
Written By :
Checked & Approved By : JLD 09.01.25
Comment : Est: D 04.11.26 Revised Steps 7 KJ/JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M304TR0875W065 304 round tube .875 x .065w



Comment: Qty.: 1.9469 f(s)/Unit Total : 19.4691 f(s)

Material: AISI 304/316 SS tubing 0.875" x 0.065" wall

(M304TR0.875W.065)

Batch: M112 472

J.P 09/01/23

2.0 BAND SAW BAND SAW



Comment: BAND SAW

1- Cut blank: 22.00" as per Dwg D3304

J.P 09/01/23

3.0 LATHE CONV. CONVENTIONAL LATHE



Comment: COVENTIONAL LATHE

1- Cut blank: 22.00" as per Dwg D3304

2- Turn as per Dwg D3304

3- Deburr

J.P 09/01/23

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.P 09/01/23

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

J.L 09/01/25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 05/01/2009 7:57:55 AM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 44356

Part Number: D3304044

Job Number:



Seq. #: Machine Or Operation: Description :

6.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



PTO

Comment: SMALL & MEDIUM FAB RESOURCE 1

- 1- Drill as per Dwg D3304 using drill Jig D3304-T1
- 2- Form as per Dwg D3304
- 3- Cut tube to length as per Dwg D3304
- 4- Check with DT8657 JIG
- 4- Deburr

FF 09/02/11
FF 10/02/24
M-10/02/24
09/02/11

10X

7.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 02/02/25

8.0 D33048 Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s)

Bracket

Pick:

Qty	Part Number	Description	Batch
1	D3304-8	Bracket	

44399 BE 09/03/17

9.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld bracket as per Dwg D3304 and QSI 004

BE 09/03/17

10.0 QC9 VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD 09-03-18

11.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 02/03/18

12.0 POWDER COATING POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

M 10/09/08

START TIME:

OVEN TEMPERATURE:

FINISH TIME:


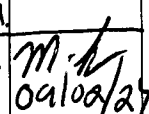


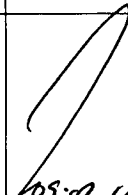
10:00
350°
10:30

BL 09-03-20

10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D 3304-044 PAR #: VIA Fault Category: Prod / FAB ASS ^{metal & small} NCR: (Yes) No DQA: D Date: 09/09/03
 Resolution: re-work Disposition: re-work QA: N/C Closed: D Date: 09/02/03

NCR: 44356		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09-02-11	6.0	Qty 10 parts were found to be not bent enough after drilling. When parts were re-bent to spec. 1 hole on each at the top stretched slightly oval. RC: 1st time / Training / making these parts.		- Using a brass plug inside, fill the 1 hole per part with weld & grind flush per QSI spec. - re-drill hole with the sig. & deburr. - Ensure bends are correct before drilling	 09/09/24	 09/02/25		 09-02-11

NOTE: Date & initial all entries

Date: Monday, 05/01/2009 7:57:55 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 44356

Part Number: D3304044

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

S 09/03/30 (10)

14.0

BLBS0016

PIP PIN



Comment: Qty.: 1.0000 Each(s)/Unit Total : 10.0000 Each(s)

PIP PIN

Pick:

Qty	Part Number	Description
1	BLBS-0016	Pip Pin

Batch

M110476

M110573

SP

15.0

CBL460

Loop Sleeve



Comment: Qty.: 2.0000 Each(s)/Unit Total : 20.0000 Each(s)

Loop Sleeve

Pick:

Qty	Part Number	Description
2	CBL-460	Loop Sleeve

Batch

M1109065

SP

16.0

CBL1240

Cable



Comment: Qty.: 1.0416 f(s)/Unit Total : 10.4160 f(s)

Cable

Pick:

Qty	Part Number	Description
12.5"	CBL-1240	Cable

Batch

M1107234

FF 09-03-30

(10)

17.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble lanyard and pip pin as per Dwg D3304

Identify as D3304-044

FF 09-03-30

(10)

18.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/03/31 (10)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 05/01/2009 7:57:55 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 44356

Part Number: D3304044

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock

Location: ST 187

SS 09/04/01 (X10)

20.0

QC21

FINAL INSPECTION/W/O RELEASE



09/04/02

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 09-04-0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

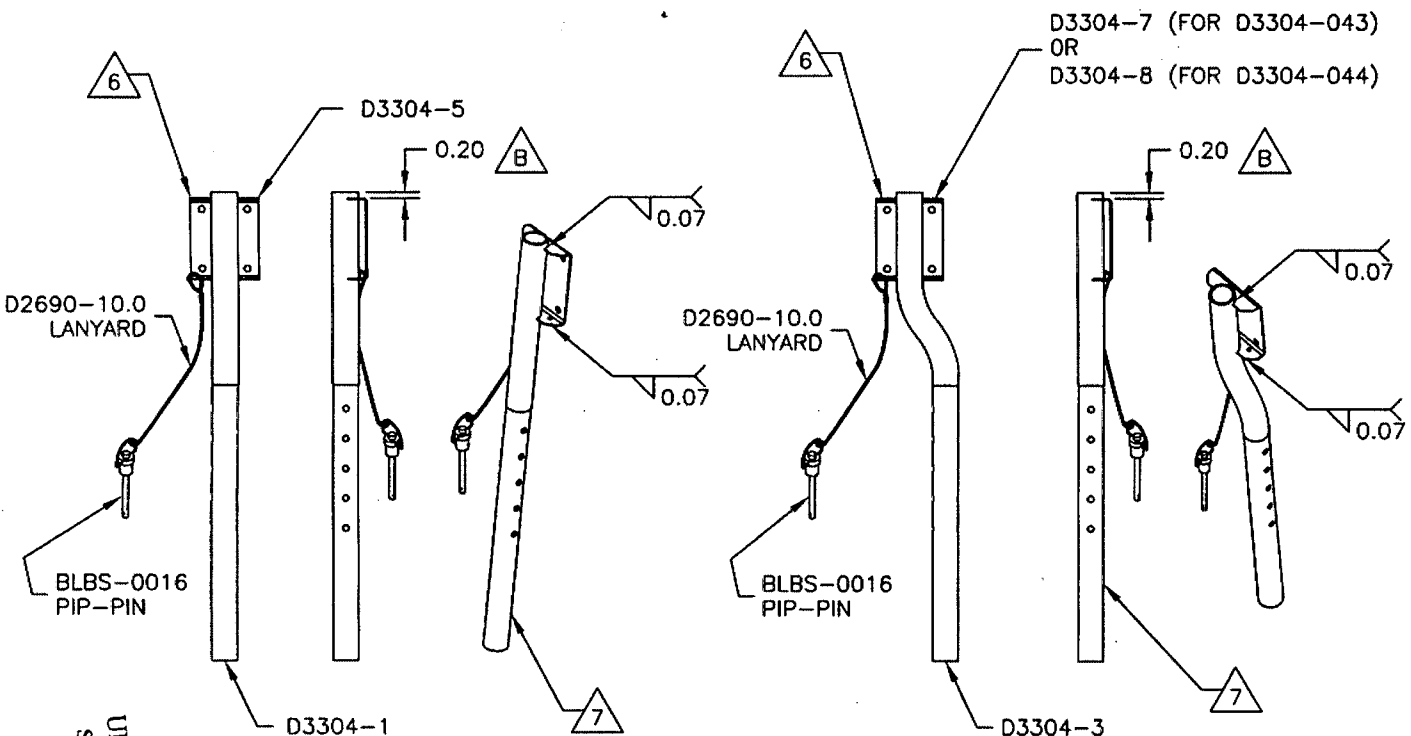
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN	RF	DRAWN BY	RF	DART AEROSPACE LTD
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
DATE	05.07.15	TITLE	D3304	REV. B
			TUBE ASSEMBLY	SHEET 1 OF 4
A	04.08.18	NEW ISSUE		SCALE
B	05.07.15	UPDATE DIMENSIONS: ADD D3304-7/-8		1:6



**D3304-044 TUBE ASSEMBLY (SHOWN)
D3304-043 OPPOSITE**

D3304-041 TUBE ASSEMBLY

D3304-041/-043/-044 NOTES:

- 1) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

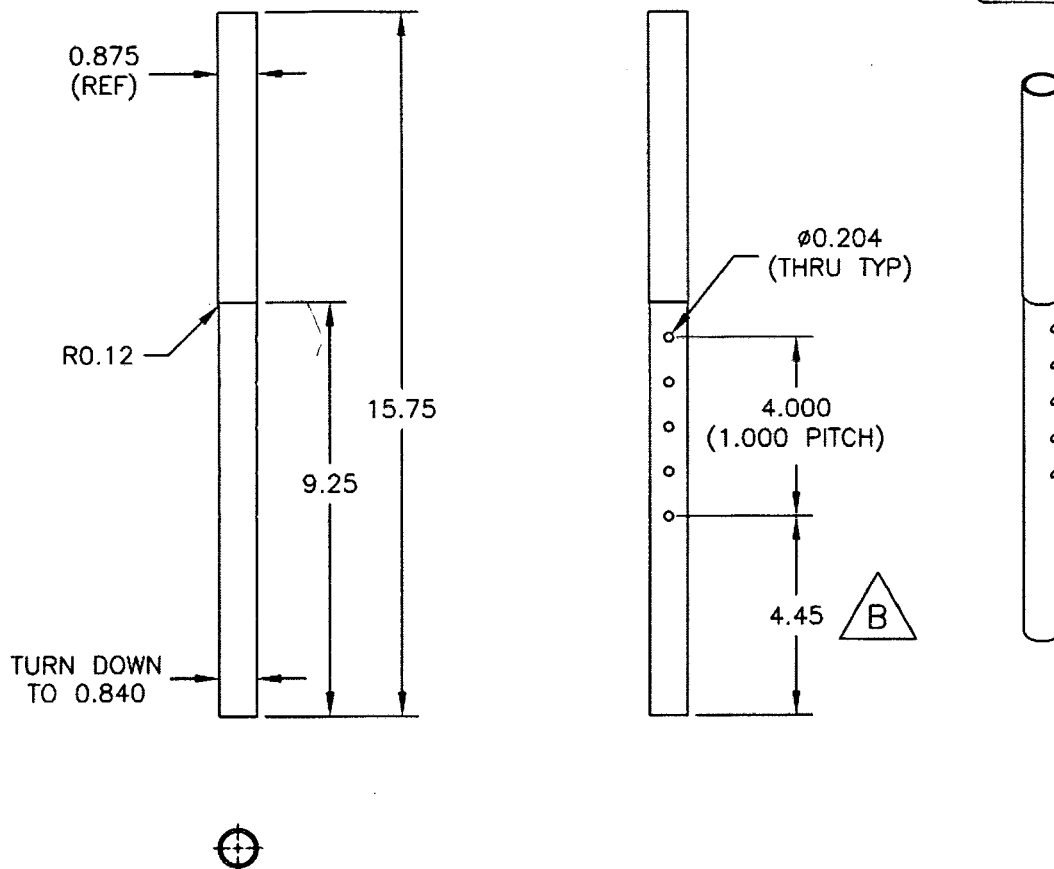
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 44380

RELEASED
05-08-11



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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 2 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

RELEASED
05.08.11 *[Signature]*



D3304-1 TUBE

D3304-1 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

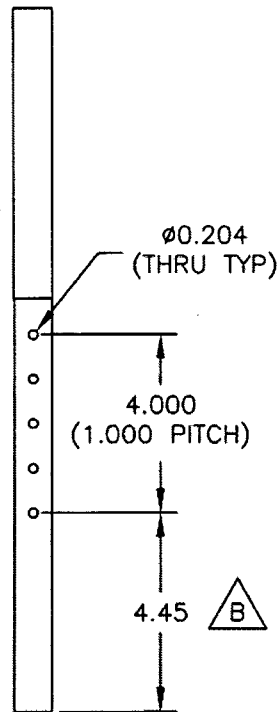
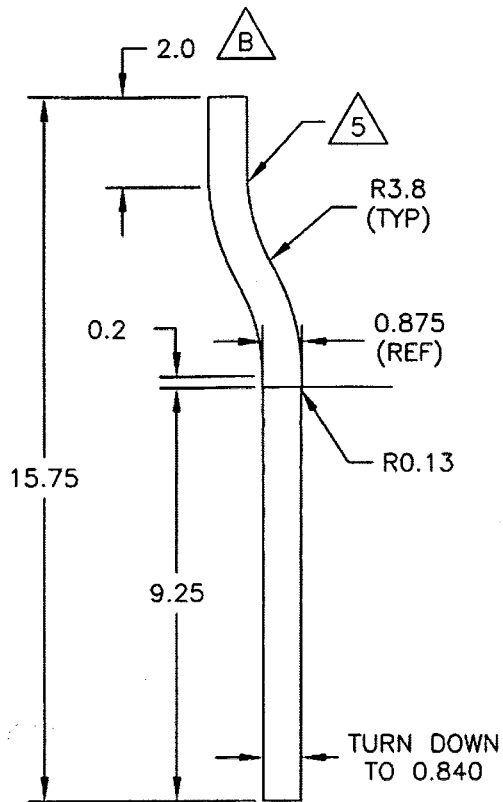
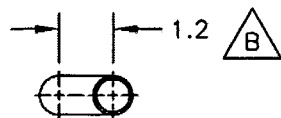
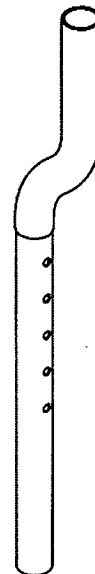
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DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 3 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

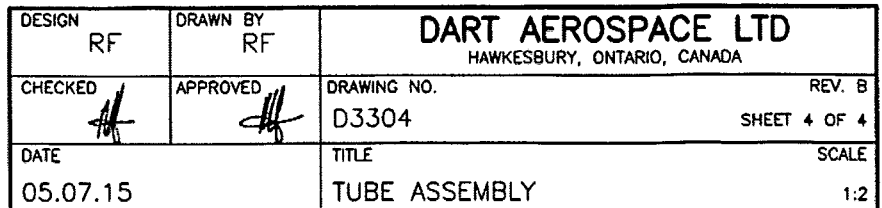
**RELEASED**
05-08-11 #**D3304-3 TUBE****D3304-3 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

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RELEASED
05-08-11



WITHOUT NOTICE

~~WORK ORDER~~

NO. 44554

1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES
4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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